

projections in the shape of arrow-heads arise at right angles to the periphery; mouth subquadrate, with the lip hardly thickened and not reflected; columellar plait fairly strong and horizontal.



Amastra (Kaunia) rex.

Diam. maj. (with the peripheral wing) 14.5, alt. 4 mm.

Hab. Summit of Konahuanui, Oahu, Hawaiian Islands, amongst dead leaves and moss.

This very interesting shell was collected by Mr. Ernest Lyman, and was kindly sent to me by Prof. H. W. Henshaw.

It somewhat recalls in form and appearance the well-known *Helicina agglutinans*, the periostracum covering the shell and being produced into an uneven wing at the periphery, some of the projections extending to 2 mm. from the shell. The species belongs to the group of *Amastra alata*, Pfr., and *A. heliciformis*, Ancy; from the latter, which is also an Oahu shell, it may readily be separated, in addition to its greater size and remarkable development of periostracum, by its more depressed form and smaller (proportionally) umbilical area.

BIBLIOGRAPHICAL NOTICES.

Index Faune Novae Zealandiae. Edited by Capt. F. W. HUTTON, F.R.S. Published for the Philosophical Institute of Canterbury, New Zealand. London: Dulau, 1904. Pp. viii, 372.

THIS is an extremely useful publication, and it is a great advantage to have such an Index to the natural productions of an area which is sufficiently limited to admit of its being given in a moderate compass. Captain Hutton's name is well known to all students of New Zealand natural history, and it is very creditable to the colony that nearly all the other contributors to the volume are resident in New Zealand.

In the Introduction the Editor deals, as fully as space will permit, with previous work, from the voyages of Captain Cook (1764-1774), accompanied by Sir Joseph Banks, and other well-known naturalists and artists, to the present time. He also discusses the elements of the New Zealand fauna and the supposed existence of the Antarctic continent, and comes to the conclusion that the New Zealand fauna and flora cannot be considered to be truly oceanic, though they must have been separated from any continent for a very long period. A short Bibliography, restricted apparently to books and papers relative to the general characteristics of the country and its fauna and flora, is also added.

The lists of species are well classified and arranged, and are available for immediate reference, even apart from the complete Index of Genera at the end of the book. We have noticed a few misprints, some of the earlier ones being corrected in a list; but they are generally not of a very serious character—"Hawthorn" for "Haworth" (p. 350) and "*Leucanium*" for "*Lecanium*" (p. 353) are the most important which we have noticed; the latter name is spelt correctly on p. 227.

There is an Appendix of naturalized animals, to which we must object that several apparently indigenous species have been included by incorrect identification. Thus, to quote two instances: on p. 349, *Monostegia antipoda*, Kirb. (a saw-fly), is wrongly given as a synonym of the European *Eriocampa adumbrata*, Klug, though it does not belong to the same genus; and on p. 353 a *Mantis* (*Orthodera ministralis*, Fabr.) is noted as introduced from Australia. In fact, closely allied but distinct species or subspecies of *Orthodera* are found in Australia, Tasmania, and New Zealand respectively, and the last was described as *Mantis novæ-zeelandiæ* by Colenso, and must retain that name. We suspect that other forms supposed to have been introduced into New Zealand from Australia will also prove, when sufficiently known, to be representative forms, and not introductions.

A Manual of Palearctic Birds. By H. E. DRESSER, F.L.S., F.Z.S., &c.
Part II. Published by the Author at 3 Hanover Square, W.

SOME time since, it will be remembered, Part I. of this work was reviewed in these pages. Therein we pointed out certain features that seemed to call for criticism. These objections apply also to this second part. The author, however, cannot be blamed for this; for even had he felt inclined to concede to the views then expressed he could scarcely do so unless a second edition is called for, and this is a by no means remote contingency.

Without question, this is a work that should find a place on the shelves of every ornithologist. Condensed as the descriptions of the species naturally are, yet a great deal of useful and valuable information concerning habits or other peculiarities of the birds of the

Palearctic Region will be found in these pages. The fact that the eggs of the Osprey taken from the nests of American birds may be distinguished by their "strong musky smell" is a case in point. But it seems hardly necessary to tell us that Ducks and Pelicans swim well! Yet Mr. Dresser gravely assures us that this is a fact!

MISCELLANEOUS.

On the Ossiferous Cave-deposits of Cyprus.

By DOROTHY M. A. BATE.

PREVIOUS to 1901 no systematic search of the cave-deposits of Cyprus appears to have been attempted. The geology was studied by M. Albert Gaudry, who published an elaborate work in 1862 with a geological map, and Drs. Unger and Kotschy in 1865 also gave a geological map of the island, differing somewhat from their predecessor.

As long ago as 1700 the Dutch traveller Corneille le Brun (Van Bruyn) published an account of his wanderings in Cyprus and the Levant, and mentions having visited a bed of bones, supposed to be those of saints, not far from the Monastery of Haghios Chrysostomos. A drawing of one of these bones is given, which Dr. Forsyth Major has since shown to be that of *Hippopotamus minutus**.

The author started in 1901, in expectation of discovering an extinct fauna in this ossiferous breccia, and this expectation was amply fulfilled, for no fewer than twelve ossiferous caves were found—five at Cape Pyla in the south-east, and seven on the southern slopes of the Kerynia Hills in the north of the island.

Two caves (mentioned by General di Cesnola in 1877, at Cape Pyla, as containing *human* fossilized bones) were first visited by the author. The rock is here composed of Miocene (probably Helvetian) limestone, weathered to a very great extent, and full of marine shells and corals, as well as numerous Echinoids (*Clypeaster portentosus*), also met with in the Miocene limestones of Malta.

Here a number of caves were discovered in the cliffs, five of which yielded remains of *Hippopotamus minutus*.

The author then describes these caves in detail. The caves explored at Cape Pyla were:—(1) The Red Cliff Cave; (2) the Great Anonymous Cave; (3) the Small Anonymous Cave; (4) Haghios Jannos; (5) Haghios Saronda. This is the cave to which formerly pilgrimages were made and candles burned in honour of the sacred remains of saints.

The cave-deposits of the Kerynia Hills are of uncertain geological age, no fossils having been obtained from the limestone-rock of

* Proc. Zool. Soc., June 1902.